

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1-14, 16-35, 37-40 are pending in this application. Claims 1, 8, 16, 18, 27 and 37 are independent. By this Amendment, the independent claims are amended, and Claims 39 and 40 are added. Support for the amendments and new claim can be found, for example, in Fig. 1 and paragraphs [0116]-[0118] and [0125] of the published U.S. application. No new matter is added.

Claims 1-3, 5-10, 12-14, 16 and 17 stand rejected under 35 U.S.C. §103(a) over Hohensee et al. ("Hohensee"), U.S. Patent No. 6,407,821, in view of Ackerman et al. ("Ackerman"), U.S. Patent Application Publication No. 2002/0171856 A1. The rejection is respectfully traversed.

Independent Claim 1 recites an image forming device comprising, *inter alia*, a receiving unit for successively receiving unconverted constituent data of a document file from an external device, and an image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received from the external device when it is judged by the judging unit that all objects necessary for displaying the specific page are stored in the storing unit.

Independent Claims 8 and 16 recite similar features.

The Office Action acknowledges that Hohensee fails to disclose the claimed image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received. The Office Action asserts that these features are disclosed by Ackerman.

Ackerman discloses a printer 10 that determines when a raw binary data protocol print job is being sent to the printer 10, while also determining when other

protocols are used for print jobs so that the print jobs will print correctly (see paragraph [0018] of Ackerman). As shown in Fig. 1 of Ackerman, the printer 10 includes therein a page queuing system 34, a page buffer 35 and a print engine 36 (misabeled as reference numeral "50" in Fig. 1). Rasterized data is sent by the page queuing system 34 to the page buffer 35 (see paragraph [0038] of Ackerman). As an alternative to temporarily storing an entire page of rasterized data in a page buffer 35, Ackerman discloses that the entire page of data may not be buffered at one time, thereby managing to operate with a much smaller amount of RAM in a "partial page buffer" (see paragraph [0038] of Ackerman). The partial data within the page buffer 35 is communicated in real time to a print engine 36 (see paragraph [0038]). The Office Action appears to believe that communicating the partial data within the page buffer 35 to the print engine 36 in real time corresponds to forming images of a page before all of the unconverted constituent data of the document file have been received.

However, the partial data within the page buffer 35 is communicated from the page queuing system 34 *within the printer 10*. The partial data within the page buffer 35 is not communicated to the page buffer 35 from an external device. Thus, the combination of Hohensee and Ackerman fails to disclose, and would not have rendered obvious, the claimed combination of features, including a receiving unit for successively receiving unconverted constituent data of a document file from an external device, and an image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received from the external device as recited in independent Claim 1, and similarly recited in independent Claims 8 and 16. Therefore, independent Claims 1, 8 and 16 are patentable over Hohensee and Ackerman for at least these reasons.

Claims 2, 3, 5-7, 9, 10, 12-14 and 17 are patentable over Hohensee and Ackerman at least by virtue of their respective dependence from the patentable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 4 and 11 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman, and further in view of Abe, JP-A-09-174955. The rejection is respectfully traversed.

Abe fails to overcome the deficiencies of Hohensee and Ackerman. Therefore, Claims 4 and 11 are patentable over Hohensee and Abe at least by virtue of their dependence from patentable independent Claims 1 and 8, respectively. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 18, 19, 23-28, 32-35, 37 and 38 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman, and further in view of Abe. The rejection is respectfully traversed.

Independent Claim 18 is directed to an image forming device comprising, *inter alia*, a receiving unit for successively receiving constituent data of the document file from an external device before the constituent data is converted into print data, and an image forming unit for forming images of objects stored in the storing unit before all of the unconverted constituent data of the document file have been received from the external device. Independent Claims 27 and 37 recite similar features.

As discussed above, Ackerman discloses that the partial data within the page buffer 35 is communicated from the page queuing system 34 *within the printer 10*.

The partial data within the page buffer 35 is not communicated to the page buffer 35 from an external device. Thus, Ackerman fails to disclose an image forming unit for forming images of objects stored in the storing unit before all of the unconverted constituent data of the document file have been received from an external device as recited in independent Claim 18, and similarly recited in independent Claims 27 and 37. Further, Abe fails to overcome the deficiencies of Ackerman, and the Office Action acknowledges that Hohensee fails to disclose these features. Thus, independent Claims 18, 27 and 37 are patentable over the combination of Hohensee, Ackerman and Abe for at least these reasons.

Claims 19, 23-26, 28, 32-35 and 38 are patentable over Hohensee, Ackerman and Abe at least by virtue of their respective dependence from the patentable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 20-22 and 29-31 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman and Abe, and further in view of Brown et al. ("Brown"), U.S. Patent Application Publication No. 2004/0216048 A1. The rejection is respectfully traversed.

Brown fails to overcome the deficiencies of Hohensee, Ackerman and Abe. Therefore, Claims 20-22 and 29-31 are patentable over the applied references at least by virtue of their dependence from patentable independent Claims 18 and 27, respectively. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

Claims 39 and 40 are presented for consideration. Claim 39 recites that the judging unit further judges whether or not the document file will be output in a normal order, successively from the first page toward the last page of the document file, or out of order, and the image forming unit forms images of the specific page after an additional judgment by the judging unit of whether the document file will be output in a normal order or out of order.

Hohensee discloses a printing system for printing a document produced by an application program 204 that generates a data stream containing page description information such as EPS and PDF objects (see Fig. 2 and col. 4, line 61 to col. 5, line 2 of Hohensee). According to Hohensee's system, all pages of a file are processed to determine if all of the resources needed to print the pages are present. When all of the resources are determined to be present, PDF data is rasterized and merged with other print data, and printed out. Ackerman simply discloses a print data detection system that determines when a raw binary data protocol print job is being sent to a printer (see paragraph [0018] of Ackerman). Neither Hohensee nor Ackerman discloses the features of Claim 39.

Claim 40 recites that if the normal order is specified, the judging unit judges whether a head page of the document file is ready for output, and if the normal order is not specified, the images of the specific page are formed by the image forming unit regardless of whether the head page of the document file is ready for output. None of the applied references discloses these features.

Thus, Claims 39 and 40 are patentable over the applied references for at least the above reasons, as well as by virtue of their dependence from patentable independent Claim 1.


Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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